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Measuring Quality of Care in Community Mental Health: Validation of Concordant Clinician and Client Quality of Care Scales

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Conflict of Interest Statement

The authors declare that they have no conflicts of interest.

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Abstract

Measuring quality of care can transform care, but few tools exist to measure quality from the client's perspective. The aim of this study was to create concordant clinician and client self-report quality of care scales in a sample of community mental health clinicians (n = 189) and clients (n = 469). The client scale had three distinct factors (Person-Centered Care, Negative Staff Interactions, and Inattentive Care), while the clinician scale had two: Person-Centered Care and Discordant Care. Both versions demonstrated adequate internal consistency and validity with measures related to satisfaction and the therapeutic relationship. These measures are promising, brief quality assessment tools.

Keywords

quality of care; community mental health; scale development; person-centered care

Introduction

Mental illness is a leading cause of disability in the U.S., accounting for over $190 billion annually in lost earnings.[1–3] However, with the support of effective treatment, many individuals with mental illness can achieve recovery characterized by increased hope and empowerment as well as improvements in functioning and symptoms. Unfortunately, there is often a quality gap between delivered care and evidence-based treatment guidelines, possibly hindering recovery and improvement for people with mental illness.[4–7] This gap in care, often referred to as the "quality chasm," has become an impetus to improve the measurement of quality of care.[8](p.5)

Measuring quality of care with robust tools can help to transform mental health care.[8] Quality measurement can serve to identify treatment gaps and lead to improved care. Indeed, medical studies have shown that measuring quality can improve care.[8,9] Further, measuring quality of care can also improve efficiency and accountability among clinicians and mental health organizations, which is increasingly important in an era of pay-for-performance mental health systems, productivity requirements, and the creation of Accountable Care Organizations.[10,11]

Assessing quality of care in mental health, however, is fraught with several challenges.[10,12] Differences in the operationalization and inclusion of quality domains pose challenges to the

accurate assessment (and ultimate implementation) of quality of care. To date, quality of care has been described as encompassing various domains, ranging from access to care to client treatment outcomes.[13–15] While there is no agreement on the main domains of quality of care, the Institute of Medicine (IOM) report on the quality of care chasm identified six widely cited domains, stating that health care should be effective, efficient, equitable, patient-centered, safe, and timely.[8] Obstacles to assessing these domains in mental health care involve lack of standardized measures, infrastructure, and polices to consistently measure quality of care.[12] The heterogeneity of mental health disorders, diversity of treatment settings, and importance of individualized treatment approaches also contribute to the difficulties of assessing quality mental health care.[12,16,17]

Accordingly, several initiatives have sought to establish key performance indicators of quality mental health care. For example, the Clinical Leaders Group of the International Initiative for Mental Health Leadership (IIMHL) brought together experts from 12 countries to conduct a multi-phase project to identify a common set of quality indicators that allows for the evaluation and comparison of mental health service quality across involved countries.[18] To date, the IIMHL project has identified several primarily system-level indicators of quality of care such as medication errors and death rates. While initiatives like the IIMHL are making laudatory steps to improve and systematize the measurement of quality of care in mental health services, the feasibility of assessing some of the quality indicators poses some challenges. First, evaluating and tracking these indicators may be burdensome for already taxed community mental health centers that do not yet have the infrastructure or technology to capture this information. Second, some of these indicators may be difficult for community-based clinicians to assess or too distal to be used as barometers to improve the care they provide.[19] Indeed, notably missing from several of these initiatives are aspects of the therapeutic relationship and person-centered care.

More importantly, although the client experience has been deemed an important quality of care indicator, perspectives of the client are not always included.[10,20] Measuring quality of care from the perspective of a client can identify gaps in care that might not be identified by staff or more objective methods of assessment. For example, some research has shown that client-rated quality of care demonstrates low convergence with quality indicators from medical charts.[21] In addition, given the increasing emphasis on patient-centered care that revolves around the needs and values of clients, engaging clients in quality measurement is vital in order to deliver responsive care that is predictive of client outcomes. Yet, comprehensive quality assessment must go beyond measures of satisfaction with services, for example, to determine predictors of more objective client outcomes (i.e., functional or symptom improvement).

One way to address the shortcomings of extant quality measures is to assess both client and clinician self-reported quality of care in domains most relevant to patient-centered outcomes. Self-report measures offer several potential benefits, such as being less labor-intensive than reviewing administrative external health records. Further, clinician and client-rated quality of care measures may also identify more immediate, specific areas a clinician can work on to improve the quality of care they provide. Similar to treatment fidelity ratings that help to reinforce important treatment model elements, clinician-rated quality of care scales can help

to remind clinicians about skills or components that are important to providing quality care.[22] Indeed, the utility of clinician self-reported quality of care has been demonstrated by studies finding a link between greater clinician-rated quality of care and improved patient satisfaction; as well as lower adverse events (e.g., medication errors, client falls), client mortality, and missed opportunities for care such as comforting or talking to patients.[23–26] Further, clinician-rated quality of care can serve as a measure of treatment quality when client-rated quality of care information is not available.

To date, previous studies generally assess self-reported quality of care using global items (i.e., how would you rate the quality of care you received/provided?), which may not capture more nuanced domains of quality of care or are not based on a clear conceptualization of quality of care. Further, despite the wide range of self-report treatment process and client outcome measures validated for community mental health settings, there is only one self-report measure to the authors' knowledge that was explicitly designed to measure quality of care in a community mental health setting.[18] To date, the majority of self-report quality of care scales have been created for medical settings (e.g. McHugh and Stimpfel; Shanafelt et al.).[23,27] In part to address these limitations, researchers recently developed a new self-report clinician-rated quality of care measure that was more comprehensive, including items that align with the IOM's six quality domains, and was specific to community mental health settings.[8] Preliminary analyses indicated that increased quality of care on this measure was associated with greater clinician expectations of clients' recovery, increased clinician job satisfaction, and reduced clinician burnout.[28] However, while the scale was created based on input from clinicians, it did not incorporate the clients' perspective of quality of care.

The aim of this study was to create concordant measures of quality of care that would assess the perspectives of both clients and clinicians in community mental health settings. Creating parallel versions of quality of care scales will not only help to identify possible treatment gaps from both perspectives but could also identify areas of incongruence between a clinician and client. Following the recommendation from Kilbourne, Keyser, and Pincus,[12] multiple stakeholders, including clients, were included in the creation, refinement, and final selection of items included on each version of the scale. First, the factor structure, reliability (i.e., internal consistency), and convergent validity of the client-rated quality of care scale with related measures were examined. Specifically, based on previous studies,[23,24,29] increased client-rated quality of care was hypothesized to be associated with increased client-rated working alliance, satisfaction with services, and perceived autonomy support. Based on the identified factor structure of the client-rated quality of care scale, the factor structure of the clinician-rated quality of care scale was confirmed and compared to the client-rated scale. Finally, the reliability (i.e., internal consistency) and convergent validity of the clinician-rated quality of care scale was examined with items assessing aspects of the therapeutic relationship and job satisfaction, which have been previously linked to reduced clinician-rated quality of care.[24,28–30]

Methods

Participants and setting

Clinician participants were 189 community mental health clinicians enrolled in a comparative effectiveness trial comparing the impact of BREATHE, an intervention to reduce professional burnout, to Motivational Interviewing (MI) on reducing clinican burnout and improving client outcomes and client-centered care.[31–33] Clinicians were eligible for the parent study if they were at least 18 years old, providing direct care to clients, willing to be randomly assigned to receive BREATHE or MI, and willing to take four online assessments over a 12 month period. For the current analyses, only baseline assessments (i.e., prior to any intervention) were examined. Staff were excluded from the current analyses if they completed less than 70% of the quality of care (QOC) measure (n = 3) or were not currently seeing clients (n = 3). The mean age of clinician participants was 40.3 (SD = 12.3). Most were white (n = 159, 84.1%), female (n = 151, 79.9%), and had either a bachelor's (n = 78, 41.3%) or graduate degree (n = 77, 40.7%) as their highest level of education. Clinicians spent an average of 24.5 (SD = 9.5) hours interacting with a mean of 23.8 (SD = 22.0) clients a week. Clinicians had worked at their community mental health center (CMHC) for a mean of 5.0 (SD = 6.1) years, and in the mental health field for a mean of 8.8 (SD = 9.0) years.

Client participants (N = 469) were being served by a clinican enrolled in the trial. For each clinician recruited, up to 5 clients who had been seen by the clinician within the past 3 months were randomly selected to participate. Clients were eligible if they were at least 18 years old, an active client at the respective CMHC, and willing to complete three interviews over a 12-month period. Clients were excluded from the current analyses if they completed less than 70% of the QOC measure (n = 1). Client participants had a mean age of 45.1 (SD = 13.1) and were primarily single (never married; n = 264, 56.3%), male (n = 243, 51.8%), and lived independently in their own apartment or house (n = 304, 64.8%). Most were unemployed and not looking for work (n = 264, 56.3%) and completed high school equivalency (n = 168, 35.8%) or less (n = 142, 30.3%).

The parent study took place at two community mental health centers; one in an urban setting in Missouri that employs approximately 300 staff and serves 4,000 clients annually, and one in a rural setting in Indiana that employs approximately 230 staff serving 6,000 clients annually. Both CMHCs offer a range of community-based programming, including: case management, home-based and school services, assertive community treatment, supported employment, individual and group outpatient services, residential programs, and medication management.

Procedure

Recruitment at both CMHCs occurred in three waves from January 2014 to March 2015. For clinician recruitment, research assistants attended staff meetings or met with staff individually to distribute recruitment materials, answer questions, and complete the informed consent process; emails were also used to recruit clinicians. After giving informed consent, clinicians completed an online survey hosted on Survey Monkey that contained

demographic questions and self-report measures. Clinician participants were provided a reduction in productivity requirements (i.e., allowed work time to participate) and continuing education credits for attending either the BREATHE or MI workshops, and received a $10 gift card for completing each assessment.

Clients were identified through electronic medical records by creating a list of clients who had recently been seen by the clinicians who agreed to participate. Using a random number generator, up to five clients per clinician were selected to approach for participation. Eligible clients who did not want to participate or were not able to be reached after multiple attempts were replaced by the next client randomly selected on the list. Clients were initially contacted by a CMHC research staff person by phone or letter to briefly explain the study and invite them to participate. Interested clients were then contacted by trained research staff to complete the informed consent process and assessments consisting of demographic questions and self-report measures. Clients were offered the option of completing the assessments with research staff either at the CMHC or in their home. Clients in both settings received $20 for completing each assessment. Study procedures were approved by the Indiana University – Purdue University Indianapolis Institutional Review Board.

Measures

Consistent with the goals of the parent study, a number of measures were included that were related to either clinician or client well-being or aspects of care. To assess the convergent validity of the client QOC scale, a subsample of measures believed to be the most closely related to the construct of quality was selected, including working alliance, satisfaction with services, and perceived autonomy support. Although parallel measures for each construct were not administered, clinicians also completed measures that were hypothesized to be related to QOC, namely job satisfaction and importance and confidence in interacting with clients in a relaxed manner.

Client and clinician self-reported quality of care—Two corresponding scales were developed for the present study to assess mental health care quality. Twenty items for the clinician scale were largely based on the clinician Quality of Care scale,[28] with additional items added to assess indicators affecting quality of care that had been identified during focus groups with clients and clinicians.[34] Items were also added to the clinician scale to ensure that it was assessing the six core domains of quality outlined by the IOM.[8] Given the importance of patient-centered care, more items were added to assess this domain. As a result, 11 new items were added, yielding a 31-item scale. Then, the initial 31 items from the clinician scale were modified (i.e., changing the perspective of each item to be from the client) to create a parallel version of the client scale (e.g., “I felt like I was really able to show compassion to a client” to “I felt like staff really showed compassion for me”). All items were individually reviewed and refined by three doctoral-level mental health service researchers who were project investigators, two consumer stakeholders who served as project research assistants, two clinician administrators from the participating CMHCs, four clinicians who served as research partners, and additional research staff. On both scales, participants are asked to report how frequently each item had occurred in the past six months on a 6-point scale (0 = *never* to 5 = *always*). Fifteen of the 31 items were reverse scored so

that higher scores indicate greater quality of care. See Table 1 for the client items, Appendix Table 1 for the clinician items, and Table 2 for the corresponding client and clinician items.

Client-rated working alliance—The working alliance was assessed with the short form of the client version of the Working Alliance Inventory (WAI).[35,36] This version of the WAI contains 12 items that a client is asked to rate on a 7-point Likert scale (1 = *never* to 7 = *always*). An example question is "[clinician's name] and I are working towards mutually agreed upon goals." Clients were asked to think about the clinician for whom they were recruited when answering each question. The WAI contains three subscales: agreement on therapy tasks, development of therapeutic bond, and agreement on therapy goals, as well as an overall working alliance total score. The WAI has demonstrated convergent, discriminant, concurrent, and predictive validity, and consistent with previous studies, the total score and subscales demonstrated acceptable internal consistency in the current sample (total: α = .92, task: α = .85; bond: α = .87; goals: α = .69).[35,37]

Client satisfaction with services—Satisfaction was measured with the 8-item version of the self-report Client Satisfaction Questionnaire (CSQ).[38] Items are rated on variable 4-point Likert scales and are summed for a total client satisfaction score. The validity and reliability of the CSQ has been established;[38] the internal consistency in the current sample was excellent (α = .90). An example question is "How satisfied are you with the amount of help you have received?"

Client-rated autonomy support—This variable was assessed with the 15-item version of the Health Care Climate Questionnaire (HCCQ).[39] Clients were asked to rate how much the identified clinician supported their autonomy on a 7-point scale (1 = *strongly disagree* to 7 = *strongly agree*). The HCCQ has been used in several studies (e.g. Williams, Grow, Freedman, et al.; Williams, McGregor, and King),[39,40] and similar to these previous studies, demonstrated excellent internal consistency in the current sample (α = .95). A sample item is "I feel that [clinician's name] has provided me choices and options."

Clinician job satisfaction—Job satisfaction among clinicians was assessed with a single self-reported item: "Overall, I am satisfied with my job." Clinicians were asked to rate this item on a 7-point scale (1 = *strongly disagree* to 7 = *strongly agree*). Single-item measures of job satisfaction have previously been found to be both an efficient and valid approach to assessing overall job satisfaction.[41,42]

Clinician importance and confidence in interacting with clients in a relaxed, nonjudgmental manner—Two questions created for the parent study were used to assess this measure: "How important is it for you to consistently interact with clients in a relaxed, non-judgmental way?" and "How confident are you that you can consistently interact with clients in a relaxed, non-judgmental way?" Based on motivational interviewing strategies of importance/confidence rulers, clinicians were asked to rate each item on a 10-point scale (1 = *not at all* to 10 = *extremely*).[33]

Analyses

Descriptive statistics were conducted to check for adherence to statistical assumptions. For QOC items, ceiling or floor effects (i.e., mean under .5 or over 4.5) and missingness were also checked. Since the original clinician-rated QOC scale by Salyers et al. was substantially modified in this study and a new client version of the QOC scale was created, the factor structure of the scale was explored.[28] Given an aim was to address a previous limitation of the QOC scale and incorporate more of the client perspective of quality of care, an exploratory factor analysis (EFA) using the maximum likelihood estimation method with geomin rotation of the client QOC measure was conducted first. The number of factors was determined based on scree tests, chi-square difference tests, and interpretability. To test whether the clinician version held the same structure as the client version (i.e., do clinicians conceptualize QOC the same way as clients?), the factor structure identified in the client QOC version was tested in the clinician version using confirmatory factor analysis (CFA). The model fit was evaluated using the cutoff criteria for fit indices.[43] Specifically, the model was evaluated based on the Comparative Fit Index (CFI; >.90 is acceptable; > .95 is preferred), Standardized Root Mean Square Residual (SRMR; < .08 is acceptable; < .06 is preferred), the Tucker-Lewis Index (TLI; >.90 is acceptable; > .95 is preferred), and the Root Mean Square Error of Approximation (RMSEA; < .08 is acceptable; < .05 is preferred). The full information maximum likelihood estimation accommodates missing data. Mplus version 7.3 was used for the analyses.

After confirming the structure of the client and clinician QOC scales, the internal consistency (Cronbach's alpha) of the identified subscales (factors) were examined. Next, convergent validity of the client QOC scale was assessed using Pearson's correlations between QOC scores and working alliance, satisfaction with services, and autonomy support. To examine the convergent validity of the clinician scale, correlations between QOC scores and job satisfaction and importance and confidence in interacting with clients in a relaxed, nonjudgmental manner were conducted.

Results

Descriptive statistics

Means and standard deviations for items on the client QOC scale are reported in Table 1 and in Appendix Table 1 for the clinician QOC scale. There were two items that had means over 4.5 on both scales, and two additional items on the clinician version that had means over 4.5. Each scale had a separate item where over 20% of respondents did not answer the question or marked not applicable. These six items were removed from both scales.

Factor structure

The EFA with the client scale retained 22 of the 25 items (three additional items were removed for interpretability or high cross-loadings) and extracted three factors, which were labeled Person-Centered Care, Negative Staff Interactions, and Inattentive Care (CFI = .94; TLI = .91; SRMR = .03; RMSEA = .062 [90% CI: .055-.068]). A chi-square difference test also suggested the three factor model over a two factor model ($\Delta\chi 2$ [301.73, df=20], p<.

001). Table 1 contains the final items and factor loadings. As seen in Table 2, the correlations between the three factors suggest related but independent subscales.

Based on the items retained from the client scale, the corresponding 22 items from the clinician scale were used to conduct the CFA (see Table 2 for corresponding items). First, a three-factor structure parallel to the client version was tested. However, the correlation between factor 2 and factor 3 was .92, suggesting that the factors were measuring highly convergent constructs for clinicians. Accordingly, these two factors were collapsed into a single factor. The two-factor structure of the clinician scale fit the data well (CFI = .91; SRMR = .06; TLI = .90; RMSEA = .048 [90% CI: .035-.060]). The first factor was labeled Person-Centered Care, and the second factor was labeled Discordant Care. Appendix Table 1 lists the final items and factor loadings. The correlation between the two factors was small (see Table 3).

Internal consistency

For the client QOC subscales, Cronbach's alpha was acceptable: Person-Centered Care = .92, Negative Staff Interactions = .84, and Inattentive Care = .74. Cronbach's alpha was also acceptable for the clinician QOC subscales: Person-Centered Care = .86 and Discordant Care = .74.

Convergent validity

Correlations between the QOC client and clinician subscale scores and hypothesized related constructs are in Table 3. For the client scale, all three subscales were significantly associated with the hypothesized related constructs in the expected directions. More specifically, greater Person-Centered Care and reduced Negative Staff Interactions and reduced Inattentive Care were significantly associated with greater working alliance (total and subscale scores), satisfaction with services, and autonomy support. Correlations reflected medium to large effect sizes. Hypotheses were also supported for the clinician-rated QOC subscales, though to a lesser magnitude (small to medium effect sizes). For the clinician scale, increased Person-Centered Care and decreased Discordant Care were significantly associated with increased job satisfaction as well as increased importance and confidence in interacting with clients in a relaxed, nonjudgmental manner.

Discussion

Measuring quality of care is a critical step to improving mental health care, but has been.[8] hampered by a lack of feasible methods that take into account client and clinician perspectives This study aimed to create parallel self-report versions of a client and clinician quality of care scale. Both versions of the scale demonstrated adequate internal consistency and were correlated with hypothesized constructs. Specifically, increased client-rated quality of care was associated with increased client-rated working alliance, satisfaction with services, and autonomy support. Further, greater clinician-rated quality of care was associated with higher levels of job satisfaction and importance and confidence in interacting with clients in a relaxed manner.

Although the overall number of factors differed between the client and clinician quality of care scale (see Table 2), they both contained a Person-Centered Care factor. This factor included items assessing individualized care, shared-decision making, a positive therapeutic alliance, as well as items providing extra care to support a client. For both the client and clinician versions of the scale, this factor made up the majority of the quality of care scale, consisting of twelve items overall. This factor aligns with the IOM's quality domain of patient-centered care, but is also consistent with the IOM's domain of effective care.[8] This factor also is comparable to the first factor, Client-Centered Care, of the previous clinician quality of care scale; but it also includes additional questions about providing services that addresses clients' current needs (i.e., client emergencies, safety planning), which are important for patient-centered care.[44]

Analyses revealed that there were two additional factors on the client quality of care scale: Negative Staff Interactions and Inattentive Care. Negative Staff Interactions included items that assessed negative verbal communication and behaviors, while Inattentive Care gauged clinicians' conscientiousness and dependability. The Negative Staff Interactions factor consisted largely of items that were not present on the previous version of the scale but align with the IOM's quality domains of safety and equity.[8] The relevance of this scale is supported by research that has demonstrated that patient perceptions of quality of care are related to the quality of their interactions with clinicians.[45,46] On the other hand, the Inattentive Care factor contains several items that overlap with the General Work Conscientiousness scale on the previous version of the clinician quality of care scale; these items most closely map onto the IOM's quality domains of efficiency and timeliness.[8]

In contrast to the client scale, when the corresponding three-factor structure was examined with the clinician scale, the correlation between the Negative Staff Interactions and Inattentive Care factors indicated that the factors were measuring nearly identical constructs for clinicians. Accordingly, the ten items were collapsed into a single factor: Discordant Care. The divergent factor structure may indicate that clients and clinicians view these types of interactions differently. Clients seem to differentiate between inattention and negative interactions, whereas clinicians do not. It may be that clinicians perceive both factors as stemming from a similar underlying cause (e.g., being tired, having a busy day), whereas clients differentiate between these factors and may view both factors as having different causes or meaning. For example, clients may view inattentive care (e.g., staff being late to sessions) as less personal and consider these behaviors to be due to various reasons unrelated to the client, while negative interactions (e.g., conflicts with the client) may be perceived as something that is directed more towards the client and reflective of the client's behavior or how the clinician views them. Future research might identify whether these aspects of quality have a differential impact on client outcomes and treatment engagement.

The observed differences in client and clinician perceptions of quality of care offer support for the recent emphasis to ensure that patient perspectives are included along with clinician views when measuring quality of care.[47] Client perspectives of quality of care may offer clinicians and administrators direct feedback about the care provided that can be used to improve the quality and efficiency of care. Also, involving clients in the assessment of their care helps to provide clients with a tangible way of actively impacting their care. Obtaining

client perspectives of quality of care can also help clinicians to ensure that the care they are providing is patient-centered and responsive to the client's needs or view of care. Indeed, studies have shown that greater patient perceptions of care are related to improved client outcomes.[48–50] Notwithstanding, measuring quality of care from the clinicians' perspective also can offer benefits, as quality of care measures can support accountability and help clinicians monitor and identify progress or areas in need of improvement.[17] Moreover, assessing both clinician and client quality of care concurrently with parallel scales also may help to identify areas where there is the most discordance and ultimately the areas that might be most in need of remediation.

There were also other ways that suggested that clients and clinicians differed in terms of how they perceive or define quality of care. First, in contrast to the original clinician scale, items assessing mistakes or errors in care did not factor into their own subscale when conducting the exploratory factor analysis on the client version.[28] After removing the item assessing "major mistakes" in care because it demonstrated a ceiling effect on both scales, the item assessing "minor mistakes" had the highest loading on the Negative Staff Interactions factor; this suggests that clients may consider minor mistakes to reflect specific communication behaviors (i.e., confronting or being "bossy" with clients). Second, there were two items, venting to clients about stress and having direct contact with clients, which demonstrated floor/ceiling effects on the clinician scale but not on the client scale; these were ultimately removed from both scales. Clinicians viewed their behaviors as more consistently having direct contact with clients and not venting their stress; whereas clients showed more variability in perceptions on these domains.

The correlations between both client and clinician quality of care and hypothesized associated constructs also shed light on how clients and clinicians conceptualized quality of care. For the client scale, all three factors were moderately to strongly correlated with increased working alliance, satisfaction with services, and autonomy. These findings are consistent and build upon previous studies that have found that clinician-rated and objective quality of care are associated with patient satisfaction, as well as studies finding that greater perceived clinician empathy is linked to improved quality of care.[23,24,30,48,51,52] However, while the magnitudes of the correlations suggest convergence with these constructs, they also suggest that the quality of care scale is not redundant with these constructs. Indeed, the quality of care scale contains items that assess the therapeutic relationship and the perceived quality of services but goes beyond working alliance and satisfaction measures by assessing areas of quality of care that are not captured by these measures, such as shared-decision making, clinician mistakes, and client improvement. The present study's findings also suggest that the Person-Centered Care factor explained more variance than the Negative Staff Interactions and Inattentive Care factors for client-rated satisfaction with services, working alliance, and autonomy support. These findings are consistent with previous research demonstrating links between person-centered care and greater client satisfaction, and also are consistent with the idea that patient-centered care is one of the driving components of improved quality of care.[54–56]

Similarly, for the clinician scale, the Person-Centered Care subscale also appeared to explain the greatest variance in the hypothesized related constructs. Consistent with other findings in

health care staff, clinician job satisfaction evidenced small to moderate correlations with the two clinician-rated quality of care subscales.[56–58] Further, the importance and confidence clinicians ascribed to working with their clients in a relaxed and non-judgmental manner were associated with greater clinician-rated Person-Centered Care and reduced Discordant Care, suggesting that being able to interact with clients in a relaxed, nonjudgmental manner is an indicator of greater quality of care for clinicians. Interestingly, clinicians' confidence in their ability, rather than the importance of interacting with clients in a relaxed, nonjudgmental manner, accounted for more variance in the quality of care subscale scores. This suggests that interventions that target clinicians' ability to be relaxed and nonjudgmental with clients, perhaps through interventions that promote clinician mindfulness (c.f., Salyers et al.; Fortney et al.), may help clinicians improve the quality of care they provide.[32,60]

Although a strength of this study was that it assessed quality of care from the perspective of both clients and clinicians from two large community mental health centers, there are several limitations that should be considered when interpreting the findings. First, although several psychometric properties of the scales were examined, the test-retest reliability of the quality of care scales was not assessed. Second, the initial study was not designed to have parallel measures of all constructs, and so validity analyses with additional scales may be useful (e.g., clinician rated-working alliance, recovery-orientation). Similarly, future studies could further validate the scales by examining relationships with objective quality indicators of care (i.e., medication errors), actual client outcomes, and additional factors that may impact care quality such as system barriers and clinician burnout and mental health. Also, given that negatively- and positively-worded quality of care items loaded onto separate factors, future research may benefit from looking at how the direction of item wording more decisively impacts the factor structure of the scales.[61] In addition, it was not possible to examine the association between specific client- and clinician-rated quality of care. That is, the quality of care scales ask about client/staff behaviors in general, not with regard to a specific client or a specific staff member. In addition, although clients were linked with specific clinicians in the parent study, the randomly selected clinician-client dyads often did not interact frequently and may not have been the most important relationships for a given client or staff. With more team-based approaches, concordance could be examined for teams of clinicians interacting with a specific group of clients.[4,62]

Implications for Behavioral Health

This study, in conjunction with the preliminary validation study, offers support for the utility of parallel clinician and client self-report quality of care scales for community mental health centers.[28] These scales offer feasible and affordable quality measures for clinicians, researchers, and administrators that go beyond measures of client satisfaction and working alliance. Further, compared to most prior self-reported quality of care scales that used a single global quality of care item and/or were created for medical settings (c.f., McHugh and Stimpfel; Shanafelt et al.), these scales provide clinicians a more comprehensive and theoretically-based measure of quality of care that is specific to community mental health settings.[23,27] Community mental health agencies as well as individual clinicians could use the scales as a brief tool to monitor and ultimately improve the quality of care they provide.

For example, clinicians and clients could concurrently complete and discuss the quality of care scales during treatment plan updates or during the completion of performance measures.[63]

Further, the scales could be used by agencies to improve clinician accountability and assess client perceptions of the provided care. For example, agencies could use both versions of the scale to identify areas of improvement for clinicians and assess whether clinicians improve over time in the identified areas. With the infrastructure to enter, analyze, and interpret data, individual clinician quality scores could also be compared against agency and team-level overall scores to see how the quality of care they provide falls relative to others. Over time, data from these measures could be used by agencies to develop benchmarks of quality care. Similarly, agencies could use agency-level data from the measures to identify future staff training needs and to help gauge whether their services are meeting the quality expectations and needs of the clients they serve. Although additional research examining the validity of the scales with similar constructs and more objective quality of care indicators is needed, these quality of care scales are promising self-report quality of care assessment tools.

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Appendix

Appendix Table 1

Factor Loadings, Means, and Standard Deviations for Clinician QOC Items (n = 189)

Item #	Item	Factor 1	*M*	*SD*
Person-centered care				
17	I was able to support a client's action step toward a personal goal.	0.82	4.05	0.92
18	I was able to come up with a creative intervention to support a client.	0.77	3.57	1.06
19	I felt like I was able to really show compassion to a client.	0.73	4.13	0.88
31	I feel I provided high quality services to clients.	0.67	4.03	0.99
21	I went "above and beyond the normal call of duty" to support a client.	0.61	3.27	1.23
15	I felt connected to the clients I am working with.	0.60	3.82	1.07
10	I saw positive progress in my clients.	0.57	3.04	1.06
28	I helped a client develop a safety plan to address potentially harmful behavior or situations.	0.54	3.17	1.36
16	I involved clients in decisions about their care.	0.52	4.31	0.93
5	I met my daily productivity expectations.	0.43	3.71	1.14
2	I spent extra time with a client who needed support.	0.35	4.03	0.95
30	I had space in my schedule to address client emergencies.	0.33	2.62	1.51
Discordant care		Factor 2		
26_R	I took a long time responding to certain client requests.	0.69	4.05	0.82
25_R	I had conflicts with clients.	0.65	4.27	0.78

Item #	Item	Factor 1	*M*	*SD*
24_R	I was irritable interacting with clients.	0.59	4.29	0.74
3_R	I had significant distractions in my work with clients.	0.51	2.63	1.37
29_R	I treated clients differently because they are my favorites.	0.49	4.19	0.98
8_R	I missed appointments or meetings with clients.	0.48	4.20	0.83
9_R	I missed deadlines at work.	0.41	3.91	1.01
4_R	I was late for work.	0.40	3.87	1.20
11_R	I made minor mistakes in my work (not likely to affect clients).	0.39	3.40	0.80
13_R	I was usually directive with clients (telling them what to do).	0.21	3.11	1.25
Items not included in the final factors				
1	I had direct face-to-face contact with clients.	-	4.66	0.62
6	I gave my full attention to clients.	-	4.11	0.80
7_R	I had clients not showing up for appointments.	-	2.33	1.11
12_R	I made major mistakes in my work (that could potentially affect clients).	-	4.55	0.59
14 R	I had difficulty prioritizing what needed to be done.	-	3.56	1.07
20	I was able to develop a meaningful treatment plan in collaboration with a client.	-	3.43	1.23
22_R	I vented to clients about my own level of stress.	-	4.66	0.62
23_R	I gave up on a client.	-	4.63	0.58
27	I used interventions that were supported by research evidence.	-	3.63	1.27

Note: QOC = Quality of Care; Items with _R are reverse scored so that higher scores indicate greater quality of care.

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Table 1

Factor Loadings, Means, and Standard Deviations for Client QOC Items (n = 469)

Item #	Item	Factor 1	Factor 2	Factor 3	*M*	*SD*
Person-centered care						
19	I felt like staff really showed compassion for me.	0.76	0.17	0.02	3.92	1.25
21	Staff went “above and beyond the normal call of duty” to help me.	0.76	−0.07	0.03	3.61	1.51
18	Staff used creative ways to help me.	0.75	0.06	−0.04	3.65	1.43
31	I feel I received high quality services.	0.73	0.17	−0.02	4.01	1.31
17	Staff helped me take steps towards one of my personal goals.	0.73	0.11	−0.01	3.88	1.30
15	I felt connected with the staff I am working with.	0.69	0.07	0.01	3.89	1.29
16	Staff involved me in decisions about my care.	0.65	0.24	−0.05	3.94	1.30
28	Staff helped me develop a plan to stay safe.	0.63	−0.06	0.09	3.76	1.49
30	I was able to “drop-in” or see staff in an emergency.	0.63	−0.01	0.05	3.43	1.76
2	Staff spent extra time with me when I needed them.	0.60	−0.06	0.21	3.68	1.43
10	I experienced positive changes in my life.	0.50	−0.15	0.08	3.28	1.46
5	Staff were able to get their work done.	0.48	0.04	0.21	4.07	1.19
Negative staff interactions						
25_R	Staff had conflicts with me.	−0.06	0.85	0.01	4.43	1.04
24_R	Staff were irritable interacting with me.	−0.02	0.67	0.14	4.44	1.06
26_R	Staff took a long time responding to my requests.	0.08	0.57	0.22	4.17	1.19
13_R	Staff were bossy/telling me what to do.	−0.01	0.56	0.26	4.22	1.28
29_R	Staff treated me differently than they treated other clients here.	0.01	0.50	0.12	4.22	1.33
11_R	Staff made minor mistakes in my care.	0.04	0.40	0.38	4.21	1.09
Inattentive care						
8_R	Staff did not show up for appointments/meetings with me.	−0.05	0.00	0.76	4.43	0.95
9_R	Staff missed deadlines with me.	−0.01	0.02	0.76	4.41	1.05
4_R	Staff were late to appointments with me.	−0.03	0.01	0.57	3.91	1.33
3_R	Staff were distracted when working with me.	0.02	0.22	0.48	4.02	1.21
Items not included in the final factors						
1	I had direct, face-to-face contact with staff at [CMHC].				4.14	1.08
6	Staff gave me their full attention.				4.06	1.21

Item #	Item	Factor 1	Factor 2	Factor 3	*M*	*SD*
7_R	I did not show up for appointments/meetings here.				3.94	1.13
12_R	Staff made major mistakes in my care.				4.64	0.89
14_R	Staff seemed to have difficulty deciding what needed to be done to help me.				4.00	1.34
20	Staff worked with me to develop a meaningful treatment plan.				3.97	1.26
22_R	Staff 'vented' about their own stress with me.				4.02	1.37
23_R	Staff gave up on me.				4.68	0.87
27	Staff used treatments based on research with me.				2.84	1.81

Note: QOC = Quality of Care; Items with _R are reverse scored so that higher scores indicate greater quality of care. In regards to the item content, the authors used the term "staff" as opposed to "clinician(s)" to allow the measure to be used among a wide range of multidisciplinary staff members.

Table 2

Comparison between Client and Clinician QOC Scales

Client Items and Factors[a]	Corresponding Clinician Items and Factors
Person-centered care	**Person-centered care**
I experienced positive changes in my life.	I saw positive progress in my clients.
I feel I received high quality services.	I feel I provided high quality services to clients.
I felt connected with the staff I am working with.	I felt connected to the clients I am working with.
I felt like staff really showed compassion for me.	I felt like I was able to really show compassion to a client.
I was able to “drop-in” or see staff in an emergency.	I had space in my schedule to address client emergencies.
Staff helped me develop a plan to stay safe.	I helped a client develop a safety plan to address potentially harmful behavior or situations.
Staff helped me take steps towards one of my personal goals.	I was able to support a client’s action step toward a personal goal.
Staff involved me in decisions about my care.	I involved clients in decisions about their care.
Staff spent extra time with me when I needed them.	I spent extra time with a client who needed support.
Staff used creative ways to help me.	I was able to come up with a creative intervention to support a client.
Staff went “above and beyond the normal call of duty” to help me.	I went “above and beyond the normal call of duty” to support a client.
Staff were able to get their work done.	I met my daily productivity expectations.
Negative staff interactions	**Discordant care**
Staff had conflicts with me.	I had conflicts with clients.
Staff made minor mistakes in my care.	I made minor mistakes in my work (not likely to affect clients).
Staff took a long time responding to my requests.	I took a long time responding to certain client requests.
Staff treated me differently than they treated other clients here.	I treated clients differently because they are my favorites.
Staff were bossy/telling me what to do.	I was usually directive with clients (telling them what to do).
Staff were irritable interacting with me.	I was irritable interacting with clients.
Inattentive care	
Staff did not show up for appointments/meetings with me.	I missed appointments or meetings with clients.
Staff missed deadlines with me.	I missed deadlines at work.
Staff were distracted when working with me.	I had significant distractions in my work with clients.
Staff were late to appointments with me.	I was late for work.
Client Items not Included in the Final Factors[a]	**Clinician Items not Included in the Final Factors**
I did not show up for appointments/meetings here.	I had clients not showing up for appointments.
I had direct, face-to-face contact with staff at [CMHC].	I had direct face-to-face contact with clients
Staff gave me their full attention.	I gave my full attention to clients.
Staff gave up on me.	I gave up on a client.
Staff made major mistakes in my care.	I made major mistakes in my work (that could potentially affect clients).
Staff seemed to have difficulty deciding what needed to be done to help me.	I had difficulty prioritizing what needed to be done.
Staff used treatments based on research with me.	I used interventions that were supported by research evidence.
Staff ‘vented’ about their own stress with me.	I vented to clients about my own level of stress.

Client Items and Factors[a]	Corresponding Clinician Items and Factors
Staff worked with me to develop a meaningful treatment plan.	I was able to develop a meaningful treatment plan in collaboration with a client.

Note. QOC = Quality of Care.

[a]Client Items listed alphabetically within each factor or section.

Table 3

QOC Factor and Convergent Validity Correlations for Clinician and Client Scales

Client OOC Correlations			
	Client QOC factors		
	Person-centered care	Negative staff interactions[a]	Inattentive care[a]
Client measures			
QOC - factors			
Negative clinician interactions	.47**	-	-
Inattentive care	.39**	.54**	-
WAI - subscales			
Agreement on tasks	.54**	.36**	.24**
Development of bond	.54**	.34**	.27**
Agreement on goals	.47**	.45**	.32**
Overall therapeutic alliance	.56**	.41**	.30**
Satisfaction with services	.65**	.38*	.32**
Autonomy support	.48**	.37*	.25**

Clinician OOC Correlations		
	Clinician QOC factors	
	Person-centered care	Discordant care[a]
Clinician measures		
QOC - factors		
Discordant care	.20**	-
Job satisfaction	.29**	.18*
Importance of relaxed, nonjudgmental client interactions	.27**	.21**
Confidence in ability to have relaxed, nonjudgmental client interactions	.38**	.37**

Note. QOC = Quality of Care; WAI = Working Alliance Inventory.

*$p < .05$;

**$p < .01$

[a]Reverse scored such that higher scores = greater quality of care.